100mA, 30V Schottky Barrier Diode

FEATURES

- Low forward voltage
- Surface mount device type
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	100	mA
V_{RRM}	30	V
V_F at I_F=100mA	1	V
$T_{J\ MAX}$	125	°C

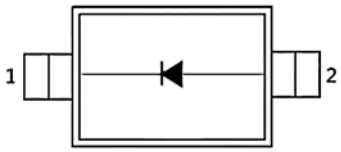
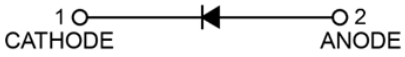
APPLICATIONS

- Adapters
- For switching power supply
- Low stored charge
- Inverter

Pb-Free RoHS COMPLIANT HALOGEN FREE

MECHANICAL DATA

- Case: SOD-123
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 11.00 mg (approximately)

PACKAGE: SOD-123	PIN CONFIGURATION	CIRCUIT DIAGRAM
		

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P_D	500	mW
Reverse voltage	V_R	30	V
Forward current	I_F	100	mA
Repetitive peak forward current	I_{FRM}	300	mA
Non-repetitive peak forward surge current @ 8.3ms single half sine wave	I_{FSM}	600	mA
Junction temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +125	°C

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ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**MIN**	**MAX**	**UNIT**
Forward voltage (1)	I_F = 0.1mA, T_J = 25°C	V_F	-	0.24	V
	I_F = 1.0mA, T_J = 25°C			0.32	
	I_F = 10mA, T_J = 25°C			0.40	
	I_F = 30mA, T_J = 25°C			0.50	
	I_F = 100mA, T_J = 25°C			1.00	
Reverse voltage	I_R = 100μA, T_J = 25°C	V_R	30	-	V
Reverse current (2)	V_R = 25V, T_J = 25°C	I_R	-	2	μA
Total capacitance	f=1MHz, V_R=1V	C_T	-	10	pF
Reverse recovery time	I_F = 10mA, I_R = 10mA to 1mA, R_L = 100Ω	t_{rr}	-	5	ns

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

ORDERING INFORMATION		
ORDERING CODE	**PACKAGE**	**PACKING**
BAT54GW RHG	SOD-123	3K / 7" Reel

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CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

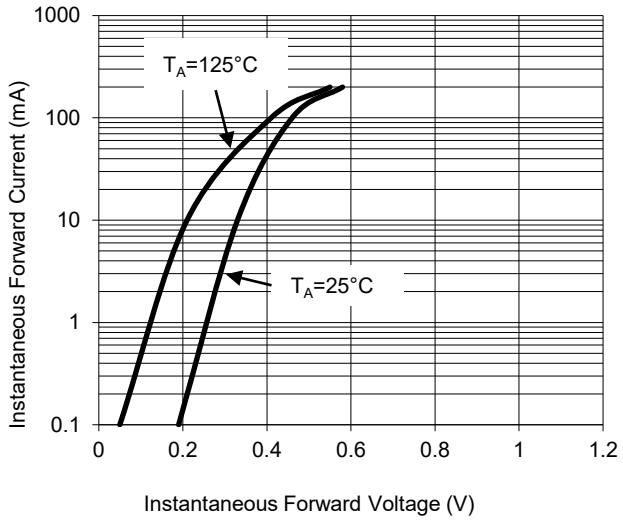


Fig.2 Typical Reverse Characteristics

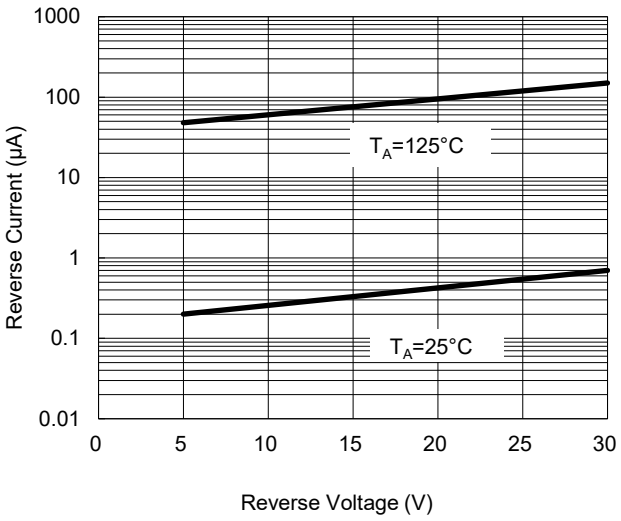


Fig.3 Typical Capacitance Characteristics

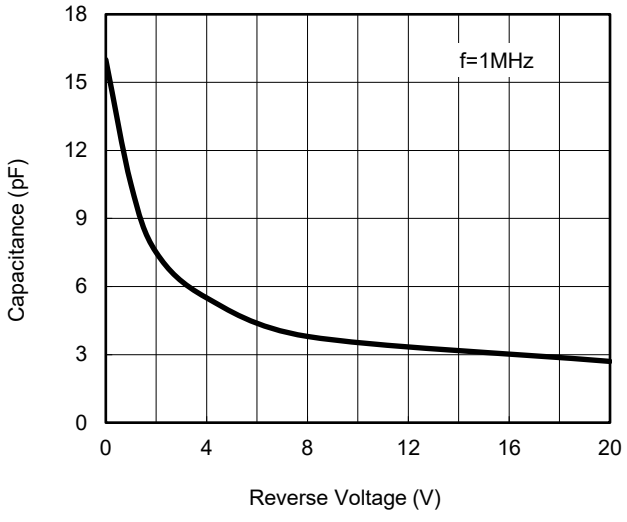
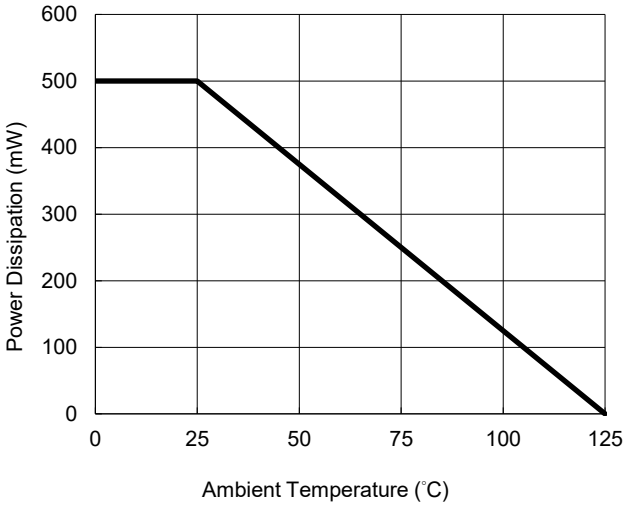


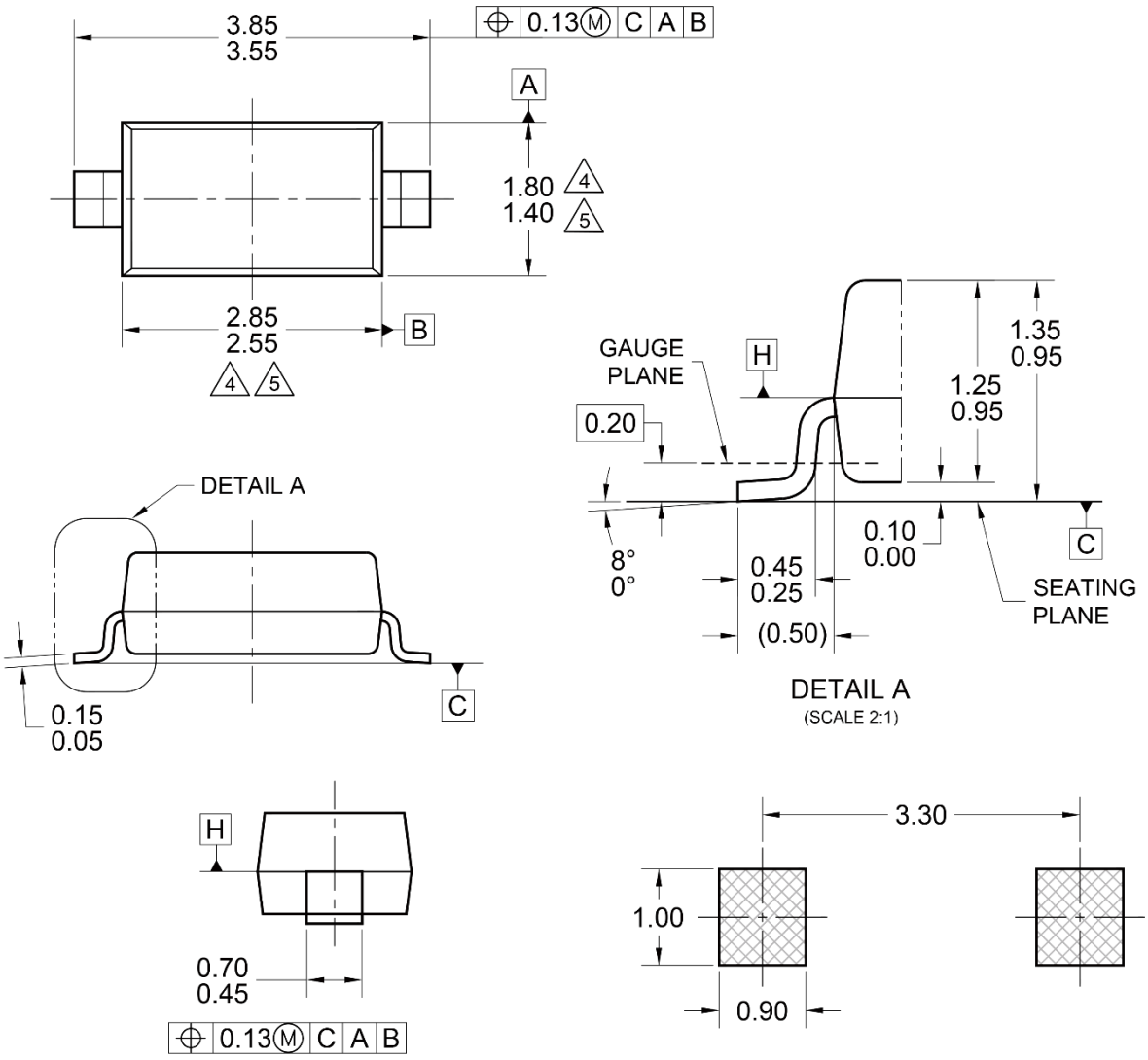
Fig.4 Power Derating Curve

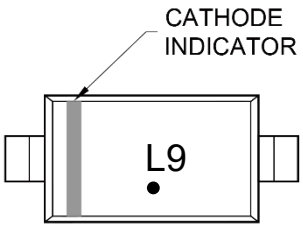


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PACKAGE OUTLINE DIMENSION

SOD-123





MARKING DIAGRAM

L9 = Device marking

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-215, VARIATION AD, ISSUE D.

4 MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH.

5 MOLDED PLASTIC BODY LATERAL DIMENSIONS TO BE DETERMINED AT DATUM PLANE H.

6. DWG NO. REF: HQ2SD07-SOD123-046 REV A.

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